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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/261,209	03/03/1999	PETER D. KARABINIS	027575-212	7458
7590	11/10/2003		EXAMINER	HOM, SHICK C
DAVID E. BENNETT COATS & BENNETT, PLLC 1400 CRESCENT GREEN SUITE 300 CARY, NC 27511			ART UNIT	PAPER NUMBER
			2666	
			DATE MAILED: 11/10/2003	

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/261,209	KARABINIS ET AL.
	Examiner	Art Unit
	Shick C Hom	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 May 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 1-46 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 47-58 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 47-58 have been considered but are moot in view of the new ground(s) of rejection.
2. Upon reconsideration, the finality of the previous office action has been withdrawn.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 47-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serizawa et al. (5,754,961) in view of Ziv et al. (5,710,768).

Regarding claims 47-58:

Serizawa et al. disclose the communication system comprising: a transmitter that transmits constant envelope modulated signal bursts wherein said constant envelope modulated signal is a Gaussian Minimum Shift Keyed GMSK modulated signal from the mobile to the relay station over an uplink RF channel (see col. 23 lines 5-18); and a receiver that receives linearly modulated signal from the relay station at the mobile telephone over a downlink RF channel (see col. 18 lines 13-28) wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts (col. 14 lines 1-5).

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Serizawa et al. disclose all the subject matter of the claimed invention with the exception of the communication system communicates signal bursts between at least one mobile telephone and a satellite relay station comprising a receiver that receives linearly modulated signal bursts wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying OQPSK signal from the satellite relay station at the mobile telephone over the downlink RF channel as in claims 47, 49, 51, 53, 55, and 57.

Tsuda from the same or similar fields of endeavor teach that it is known to provide the communication system communicates signal bursts between at least one mobile telephone and a satellite relay station (col. 5 lines 38-46) comprising a receiver that receives linearly modulated signal bursts wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying OQPSK signal from the satellite relay station at the mobile telephone over the downlink RF channel (col. 8 lines 25-32). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the communication system communicates signal bursts between at least one mobile telephone and a satellite relay station comprising a receiver that receives linearly modulated signal bursts wherein said linearly modulated signal is an

Offset Quadrature Phase Shift Keying OQPSK signal from the satellite relay station at the mobile telephone over the downlink RF channel as taught by Tsuda in the communications system of Serizawa et al. The receiver that receives linearly modulated signal bursts from the satellite relay station at the mobile telephone over the downlink RF channel can be implemented by substituting the downlink QPSK modulator with the OQPSK modulator of Tsuda at the receiver of Serizawa et al. The motivation using the receiver that receives linearly modulated signal bursts wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying OQPSK signal from the satellite relay station at the mobile telephone over the downlink RF channel as taught by Tsuda in the communication system of Serizawa et al. being that it provides an improved method of maintaining frame synchronization for the system using the technique of receiving linearly modulated OQPSK signal at the receiving end.

#### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.  
Wilson et al. disclose a multi-modulation scheme compatible radio.

Gardner discloses open-loop phase estimation methods and apparatus for coherent demodulation of phase modulated carriers in mobile channels.

7. Any response to this nonfinal action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick Hom whose telephone number is (703) 305-4742. The examiner's regular work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and out of office on alternate Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao, can be reached at (703) 308-5463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

*Seema S. Rao*  
SEEMA S. RAO 11/3/03  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

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October 30, 2003